1241. **Samra, J.S. and Singh, Shiv Charan. 1994.** Extractable nutrients, carbon, litter and ground flora species composition under tree plantations in Bunga watershed- A discriminant analysis. *Indian J. Soil Conserv.*, 22(3): 41-48.

Ground flora species composition, litter, humus, pH, organic carbon and extractable P, K, Zn, Mn, Fe and Cu under *Leucaena leucocephala, Acacia catechu, Acacia nilotica* and natural grasses were differentiated in a community protected watershed at Bunga village in Shiwalik foothills of Haryana State. Most of the extractable soil nutrients (except P and C) were in the range of sufficiency to sustain biomass productivity of the existing flora for providing sustainable conservation. Discriminant analysis distinguished 0-5 cm layer from 5-15 and 15-30 cm depths especially in respect of organic carbon, Mn and K and demonstrated soil improvements. Significant distinction among soils of the tree plantations was elaborated by the first two canonical functions. Differences in ground flora species composition under three plantations were explained by the discriminant analysis. Allelochemics concentrations in the litter of tree composition under three plantations were explained by the discriminant analysis. Allelochemics concentrations in the litter of tree species, soils and their phytotoxicity on the test seedlings of *Phaseolus aureus* differed significantly. Monocultures have, therefore, set in definite trends in the soils and associated ground flora and these effects need to be watched carefully in the sustainable watershed